

Agenda Item: 9

Meeting Date: August 11, 2005

CONSIDERATION OF A RESOLUTION APPROVING SCIENCE PROGRAM GRANTS AND AUTHORIZING THE DIRECTOR, OR DESIGNEE, TO PROCESS THE APPROVED GRANTS (PROPOSITION 204, \$3.1 MILLION; PROPOSITION 50, \$6.0 MILLION) AND RECOMMENDING TO THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES TO APPROVE THE SCIENCE PROGRAM GRANT THAT WOULD BE FUNDED BY PROP. 13 (\$1 MILLION) AND RECOMMENDING TO THE U.S. GEOLOGICAL SURVEY TO APPROVE THE SCIENCE PROGRAM GRANT THAT WOULD BE FUNDED BY THE GEOLOGICAL SURVEY (\$0.6 MILLION)

Summary: The CALFED Science Program has completed its review of the 142 proposals submitted in response to its 2004 Proposal Solicitation Package (PSP). The Final Selection Panel, under new funding constraints, is recommending the Authority fund those proposals recommended for funding now with existing funds (Attachment 1).

Recommended Action: The Authority adopt the attached Resolution 05-08-02, which will approve Science Program grants and authorize the Director, or designee, to execute approved grants from Propositions 204 and 50, and recommends that the Director of the Department of Water Resources approve the grant funded by Proposition 13 and that the U.S. Geological Survey approve the grant funded by the Geological Survey.

Background

The purpose of the 2004 CALFED Science Program PSP, which was open to applicants between September 14, 2004 and January 6, 2005, is to invest in projects that develop new knowledge about how water use and management activities interact with and affect key aquatic species and environmental processes across spatial and temporal scales. A total of 142 proposals were submitted, all of which went through a rigorous technical review process (Attachment 3) that was adopted by the Authority in August 2004, and comprised of independent reviews by external scientists followed by a comprehensive review by a technical synthesis panel.

Multi-institutional proposals went through an additional collaboration panel review to judge if project components were adequately linked. Proposals of high technical quality were then reviewed by a Selection Panel comprised of senior CALFED agency representatives, scientists, and stakeholders whose primary purpose was to make funding recommendations to the Authority based on the potential importance to the CALFED Program. These recommendations were made available to the public for comment, after which time the Selection Panel met again to consider those comments.

Because of funding constraints within the CALFED Science Program, the amount of funding initially earmarked for the 2004 Science Program PSP has been reduced from \$20 million to \$10 million. As such, the Selection Panel found it necessary to divide the proposals into two groups: (1) those recommended for funding now with existing funds (Attachment 1); and (2) those recommended for funding if additional funds become available in the future (Attachment 2). A summary of these recommendations and the source from which the Science Program proposes to fund each proposal is included in Attachments 1 and 2. Detailed reviews for all 142 proposals and all PSP documents are accessible through the Science Program PSP website at http://science.calwater.ca.gov/psp/psp_package.shtml

The Science Program firmly believes that the proposals summarized in Attachment 2 merit funding due to their high technical quality and timely relevance to CALFED needs. Although funding sources for these proposals cannot be identified now, Science Program staff will continue to look for potential sources.

Fiscal Information

Funding Sources: Proposition 13, \$1.0 million; Proposition 204, \$3.1 million; Proposition 50 \$6.0 million; Federal (U.S. Geological Survey), \$0.6 million.

Term: October 1, 2005 to December 30, 2009

Total Amount: \$10,686,456

List of Attachments

Attachment 1 – Fund Now: Summary Table of Funding Recommendations

Attachment 2 – Fund with Potential Future Funds: Summary Table of Funding Recommendations

Attachment 3 – Summary of Proposal Review Process

Resolution 05-08-02

Contact

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Science PSP Final Selection Panel Recommendations
Fund Now: Summary Table of Funding Recommendations

#	Title	Lead PI	Amount Requested	Final Selection Panel Rec.	Funding Source
84	CASCaDE: Computational Assessments of Scenarios of Change for the Delta Ecosystem	Cloern, James E., PhD.	\$1,842,870	\$1,662,870	Prop 204
106	Modeling the Delta Smelt Population of the San Francisco Estuary	Kimmerer, Wim J.	\$1,107,027	\$997,027	Prop 13
107	Foodweb support for the threatened delta smelt and other estuarine fishes in Suisun Bay and the western Sacramento-San Joaquin Delta	Kimmerer, Wim J.	\$1,306,500	\$1,170,000	Prop 50
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122	Biomass and toxicity of a newly established bloom of the cyanobacteria <i>Microcystis aeruginosa</i> and its potential impact on beneficial use in the Sacramento-San Joaquin Delta	Lehman, Peggy W., PhD	\$602,914	\$500,000	Prop 50
140	Life History Variation in Steelhead Trout and the Implications for Water Management	Mangel, Marc, Ph.D.	\$1,136,095	\$1,026,095	Prop 50
179	Chinook salmon rearing in the San Francisco Bay-Delta system: Identification of geochemical markers to determine Delta use	Ingram, B. Lynn, PhD.	\$197,689	\$197,689	Federal
214	A Statistical Model of Central Valley Chinook Incorporating Uncertainty	Botsford, Louis W., PhD.	\$754,631	\$679,631	Prop 50
295	How Abiotic Processes, Biotic Processes, and Their Interactions Sustain Habitat Characteristics and Functions in River Channels and their Floodplains: An Investigation of the Response of a Gravel-Bed Reach of the Merced River to Restoration	Dunne, Thomas	\$2,840,520	\$1,400,000	Prop 204
299	Review of four juvenile salmon coded wire tag experiments conducted in the Delta	Brandes, Patricia L.	\$83,100	\$83,100	Federal
313	SURVIVAL AND MIGRATORY PATTERNS OF CENTRAL VALLEY JUVENILE SALMONIDS	Klimley, A. Peter, Ph.D.	\$2,150,766	\$1,500,000	Prop 50
318	ARE 'APPARENT' SEX REVERSED CHINOOK SALMON A SYMPTOM OF GENOTOXICITY?	May, Bernie, PhD	\$143,735	\$143,735	Federal
332	Phytoplankton communities in the San Francisco Estuary: monitoring and management using a submersible spectrofluorometer	Mueller-Solger, Anke B., PhD.	\$159,160	\$159,160	Federal
Totals			\$13,462,996	\$10,686,456	

**Science PSP Final Selection Panel Recommendations
Fund with Potential Future Funds: Summary Table of Funding
Recommendations**

#	Title	Lead PI	Amount Requested	Final Selection Panel Rec.	Funding Source
27	Interactions of mercury and selenium in bioaccumulation and toxicity in San Francisco Bay plankton	Fisher, Nicholas S., PhD	\$476,226	\$476,226	
47	Responses of tidal wetlands to invasive cordgrass, sea level rise, and sediment supply	Dr. Donald Strong	\$540,656	\$500,000	
85	Quantitative indicators and life history implications of environmental stress on sturgeon	Kueltz, Dietmar, PhD.	\$999,481	\$999,481	
105	Ecological consequences of elevated salinity in the Sacramento-San Joaquin Delta	Kimmerer, Wim J.	\$1,295,321	\$550,000	
136	Hydrodynamics and Sediment Transport in a Shoal-Channel Estuary: The Cycling of Sediments in San Pablo Bay	Stacey, Mark T., PhD.	\$967,525	\$967,525	
169	Model-based Evaluation of Salmon Rearing in Tributary, Mainstem, and Delta Habitats	Wilzbach, Margaret A.	\$535,298	\$535,298	
246	BREACH III: Evaluating and Predicting 'Restoration Thresholds' in Evolving Freshwater-Tidal Marshes	Charles A. Simenstad	\$2,232,035	\$1,500,000	
Totals			\$7,046,542	\$5,528,530	

SELECTION PROCESS AND CRITERIA

Selection Process and Review Criteria

Proposals will be reviewed using a multi-step, qualitative evaluation process. The [California Bay-Delta Authority](#) (Authority) will be relying on many scientific experts to assist in the review of proposals. Individuals assisting with reviews of proposals will be selected based on their expertise in the proposed areas of study. Individuals assisting in the final selection process will represent diverse scientific and technical fields including academic, government, and private interests.

General Selection Process

All complete proposals will undergo administrative review and external scientific peer review prior to consideration by a Technical Synthesis Panel (Technical Panel). The Technical Panel will use the external peer reviews and provide an unambiguous recommendation regarding the technical quality and likelihood of success of every proposal. Those proposals recommended as “fundable” by the Technical Panel will be forwarded for further consideration. Proposals for collaborative studies recommended for funding whose proponents wish to be considered for a special category of funds set aside to promote multi-institutional and multidisciplinary studies will then be reviewed by the [San Francisco Bay-Delta Science Consortium](#) (Consortium). Recommendations from the Consortium and the Technical Panel will then be provided to a Selection Panel. The Selection Panel’s charge is to make preliminary recommendations on funding those proposals forward by the Technical Synthesis Panel based on [California Bay-Delta Program’s](#) (CALFED’s) overall information needs and balances between short-and long-term- and species-specific and ecosystem-based approaches. The Selection Panel’s initial funding recommendations, the executive summaries, and all review comments (anonymous) will be sent out for public comment. The Selection Panel will meet again after close of the public comment period to consider the comments and make a final recommendation to the Authority and the other funding agencies. The process is outlined in [Figure 3](#).

More details about the nature of each review step are described below.

Administrative Review

Science Program staff will review all proposals to ensure compliance with requested information such as budgets, appropriate subcontracting mechanisms, and other project information and report their findings to the Selection Panel.

External Scientific Review

Three external independent reviewers will be selected for each proposal based on expertise in the specific subject area of the proposal. External scientific reviewers will specifically be asked to evaluate proposals based on the scientific review criteria in Table 1; make overall recommendations as to whether proposals are excellent, very good, good, fair, or poor; and explain their recommendations.

Table 1. Scientific Evaluation Criteria

Goals. Are the goals, objectives, and hypotheses clearly stated and internally consistent? Is the idea timely and important?

Justification. Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot, or demonstration project or a full-scale implementation project justified?

Approach. Is the approach well designed and appropriate for meeting the objectives of the project? Is the approach feasible? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology, or approaches? Will the information ultimately be useful to decision makers?

Feasibility. Is the approach fully documented and technically feasible? What is the likelihood of success? Are the scale and budget of the project consistent with the objectives and within the grasp of the authors?

Monitoring. If applicable, is monitoring appropriately designed (pre-post comparisons; treatment-control comparisons)? Are there plans to interpret monitoring data or otherwise develop information?

Products. Are products of value likely from the project? Are contributions to larger data management systems relevant and considered? Are interpretative (or interpretable) outcomes likely from the project?

Capabilities. What is the track record of the authors in terms of past work? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Technical Synthesis Panel

The role of the Technical Panel is to evaluate and provide unambiguous ratings of each proposal's technical quality to the Selection Panel. The Technical Panel will consider all external reviewer comments in their overall technical evaluation of the proposals. The result of these discussions will be a panel rating of fundable, fundable with modifications, or not fundable along with clear evaluation statements for each technical review criterion in Table 1. In summary, this panel provides information on the scientific quality of each proposal to the Selection Panel.

San Francisco Bay-Delta Science Consortium Panel and Collaboration Review

The Consortium (<http://www.baydeltaconsortium.org/>) is an organization formed to promote collaboration among researchers from agencies and academic, nonprofit, and local institutions in the region. Most of the CALFED agencies are also signatories of the Consortium Memorandum of Understanding.

A subgroup of the Consortium steering committee, comprised of senior members of the CALFED management community, academic institutional administrators, and nonprofit research program managers will be reviewing a special subset of proposals against the collaboration review criteria outlined in Table 2. Proposals that undergo this special review must have indicated they are seeking additional funds set aside for multi-institutional, multidisciplinary projects and have received a ranking of fundable or fundable with modifications from the Technical Synthesis Panel. The Consortium review committee will rate only the collaborative elements of each proposal (Table 2. Collaboration Evaluation Criteria) as excellent, very good, good, fair, or poor and explain their rating. The results of the Consortium review will be provided to the Selection Panel.

Table 2. Collaboration Evaluation Criteria

Collaboration. Will the results of the collaborative effort be greater than the sum of its parts? Is it clear why the subprojects are part of a larger collaborative proposal rather than several independent smaller ones?

Interdependence and Integration. Does the proposal have an example that clearly articulates the conceptual model of each subproject and how they link together as a whole? Are the boundaries of the study plans focused and cohesive, yet well delineated? Is there a plan for potential differences in the stages of subproject completion times? Are there clear plans for analyses and interpretations which seek to identify and quantify relationships among the data collected in various subprojects rather than separate analyses for each subproject?

Project Management. Is it clear who will be performing management tasks and administration of the project? Are there resources set aside for project management and time given for investigators to collaborate? Is there a process for making decisions during the course of the project? Are there acknowledgments of potential barriers to collaboration and explanations of how team members will overcome barriers particular to their institutions?

Team Composition. Does the lead principal investigator have successful management history and experience leading collaborative teams? Is it clear that all key personnel are committed to making significant contributions to the project? Do team members have complementary skills?

Communication of Results. Is there a clear plan for comprehensive and cohesive reporting of project progress to the CALFED community?

Selection Panel and Initial Funding Recommendations

The primary purpose of the Selection Panel is to make strategic funding recommendations on proposals based on the following criteria:

- Does the proposal support CALFED's broad information needs?
- Does the proposal meet one or more of the priorities described in this solicitation?
- How feasible is the proposal given funding availability and constraints?
- What was the performance of authors on other CALFED or CALFED-related projects (if applicable)?; and
- Does the overall set of recommended proposals represent a balance between short-term and long-term benefits and species-specific versus ecosystem process approaches?

The Selection Panel will make preliminary recommendations for funding based on the evaluations conducted at all previous levels. Recommendations will consist of ranking proposals as fund, fund after modifications now, fund with potential future dollars (with or without modifications), and do not fund. Proposals that received a ranking of "not fundable" from the Technical Synthesis Panel will not be considered by the Selection Panel.

The Selection Panel will be comprised of technical and resource-management experts covering a broad range of expertise. The CALFED Lead Scientist will determine panel membership and will create a balance on the panel of practicing scientists, science managers, and advisors with expertise in agency and stakeholder concerns.

The Lead Scientist, or designate, will serve as a nonvoting director for the panel with the primary responsibility for assuring that the discussion is balanced, fair, and comprehensive. As a body, the

Selection Panel should be well known and experienced, well connected with others in their respective fields, representative of different specialties within these fields, and familiar with the issues and ongoing activities in one or more of the regions of the Bay-Delta System.

Public Nature of Review

After the Selection Panel has made its preliminary funding recommendations, all review comments (without reviewers' names or affiliations), the executive summary, basic project information (e.g., title and authors), and panel recommendations will be made available to the public for comment. Written comments submitted to the Science Program will be compiled and presented to the Selection Panel at the close of the public comment period. Only written comments will be accepted. The public comment period will last 4 weeks.

Final Selection Process

The Selection Panel will meet to consider comments received during the public comment period and, where appropriate, revise the preliminary recommendations. This panel will submit final recommendations to the Authority and other appropriate funding agencies.

California Bay-Delta Authority

The Authority has the ultimate discretion to choose to award a package of grants it determines is most responsive to its charge to promote implementation of the CALFED Bay-Delta Program in a balanced manner, consistent with the goals and objectives of the CALFED ROD. Due to funding constraints, all high quality proposals will not necessarily receive funding. The Authority will be asked to make a decision on recommendations from the Selection Panel. Upon a final decision by the Authority, staff will directly notify all applicants of the final outcome of the process, post the full text of funded proposals on the Science Program website, and begin working with funded applicants to prepare grant agreement documents.

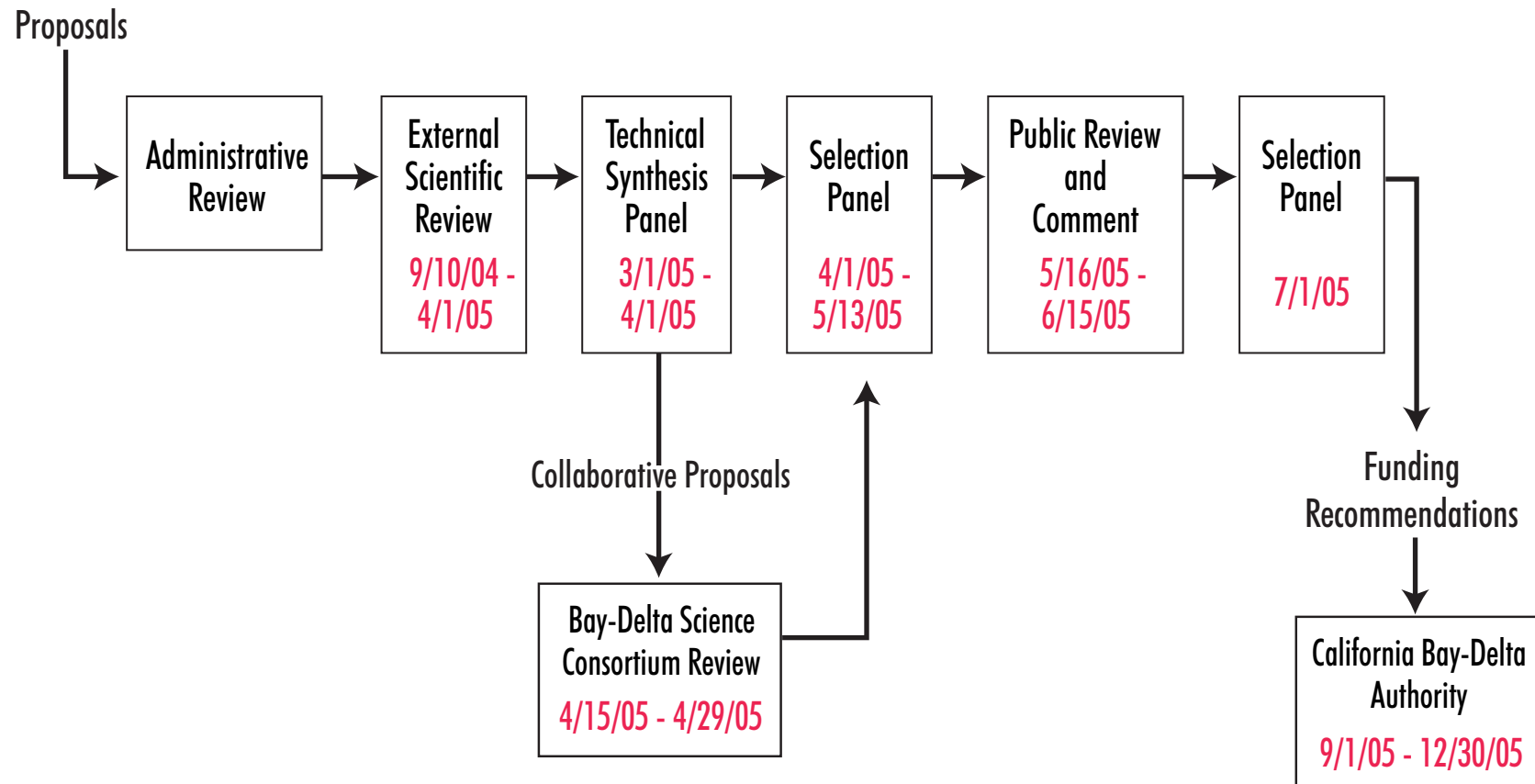
Conflict of Interest Rules for Participants in Proposal Review Process

The California Bay-Delta Authority will manage potential conflicts of interest by selecting reviewers who have no financial connection to the proposals they are reviewing. The participants in the proposal review process have been selected based on their scientific and technical expertise, not the agency or organization they work with. Individuals participating in each step of the review process must comply with federal and State conflict of interest laws. Applicable statutes include, but are not limited to, Government Code section 1090 and Public Contract Code sections 10365.5, 10410 and 10411 for State conflict of interest requirements.

Reviewers who have assisted in the development of a proposal, will receive a financial benefit from the funded project, or have a financial interest under State conflict of interest laws will not be allowed to conduct reviews.

Reviewers who have a connection with the applicants or the submitting entity must reveal their connections prior to performing the review. Such connections will not necessarily disqualify the reviewer, so long as legal conflict of interest requirements are met. A connection to an applicant exists if any of the following relationships were applicable during the past 4 years: client/consultant; collaboration on research, pilot, or implementation proposal or project; co-authorship; thesis or postdoctoral advisorship; supervisor/employee relationship. An institutional connection exists between employees and their employers when, for example, a reviewer and an applicant are employees of the same State or federal

agency even if they are in different divisions of the agency. Similarly, a university faculty member will have an institutional connection with a proposal submitted from that university, even if the applicant is in a different department of that university campus ([Figure 3](#)).



CALFED Science Proposal Solicitation Package

Agenda Item: 9

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RESOLUTION 05-08-02

APPROVING SCIENCE PROGRAM GRANTS AND AUTHORIZING THE DIRECTOR, OR DESIGNEE, TO EXECUTE THE APPROVED GRANTS (PROPOSITION 204, \$3.1 MILLION; PROPOSITION 50, \$6.0 MILLION) AND RECOMMENDING TO THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES APPROVAL OF THE GRANT THAT WOULD BE FUNDED BY PROPOSITION 13 (\$1 MILLION) AND RECOMMENDING TO THE U.S. GEOLOGICAL SURVEY APPROVAL OF THE GRANT THAT WOULD BE FUNDED BY THE GEOLOGICAL SURVEY (\$0.6 MILLION).

WHEREAS, the CALFED Science Program Proposal Solicitation Package (PSP) is a key element to providing CALFED agencies and stakeholder community with priority information needed to support program-wide management; and

WHEREAS, the priorities, criteria and process were reviewed and commented on in public session by the California Bay-Delta Authority (Resolution 04-08-09) which recommended that the PSP proceed consistent therewith;

WHEREAS, the recommended proposals underwent a rigorous review process resulting in proposals that are both highly relevant to CALFED needs and of very high technical quality, with a good probability of success;

NOW, THEREFORE, BE IT RESOLVED that the California Bay-Delta Authority approves the grants listed on Attachment 1 funded by Proposition 204 and Proposition 50, and authorizes the Director, or his designee, to award and execute those grants; and

BE IT FURTHER RESOLVED that the California Bay-Delta Authority recommends to the Director of the Department of Water Resources that the Department approve and award the grant listed on Attachment 1 to be funded by Proposition 13, and recommends to the United States Geological Survey that it approve and award the grants listed on Attachment 1 to be funded with federal funds.

CERTIFICATION

The undersigned Assistant to the California Bay-Delta Authority does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the Authority held on August 11, 2005.

Dated: _____

Assistant to California Bay-Delta Authority

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